

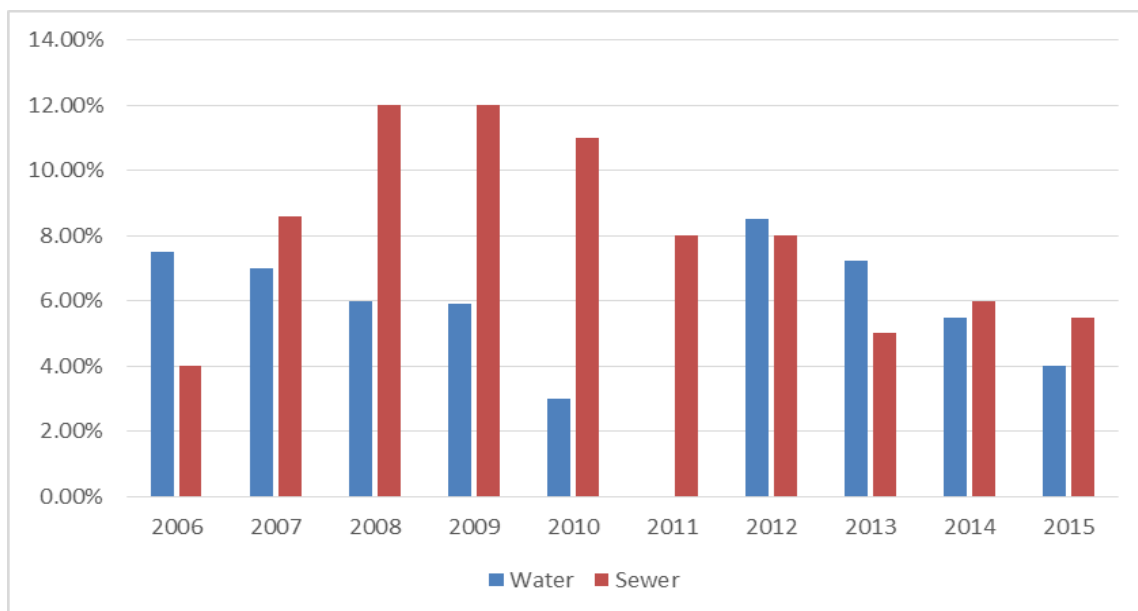
Meeting Summary.

Following is a summary of the issues discussed at the WaterStat meeting on October 23, 2015. Analysis provided by the Office of Performance and Data Analytics.

SERVICE RATES OVERVIEW

- **Rate trends over time.** While water and sewer services are billed together, the total amount is comprised of separate rates, one for water, the other for sewer. While both rates have changed over the past 10 years, they do not necessarily change in lockstep.

Service Rates Increases: Past 10 Years



- **Breakdown of costs.** As already mentioned, the water and sewer charges are billed jointly, even if rates are separate. The rates themselves, however, are also derived from other components.
 - a. For water the rate is calculated from a base rate plus a usage rate. The base rate is related to the size of the meter installed, whereas the usage rate is determined by the actual flow of water through the meter. (See charts below for pricing)
 - b. Sewer charges are also based on the size of the water meter and the water flowing through that meter.

See the charts below for reference, they break down the charges for each rate.

Meeting Summary

GCWW Water Service Charges

January 1st, 2015

Meter Size	Inside Cincinnati		Incorporated		Unincorporated		Butler & Warren		Arlington Heights		Venice Gardens
	Monthly	Quarterly	Monthly	Quarterly	Monthly	Quarterly	Monthly	Quarterly	Monthly	Quarterly	Monthly
5/8	\$ 12.10	\$ 17.49	\$ 14.31	\$ 19.42	\$ 15.34	\$ 20.82	\$ 16.46	\$ 22.34	\$14.96	\$21.37	\$12.00
3/4	\$ 13.45	\$ 21.55	\$ 15.59	\$ 23.26	\$ 16.71	\$ 24.93	\$ 17.93	\$ 26.75	\$16.57	\$26.20	\$12.00
1	\$ 15.33	\$ 27.20	\$ 17.38	\$ 28.63	\$ 18.63	\$ 30.69	\$ 19.99	\$ 32.92	\$18.81	\$32.93	\$12.00
1.5	\$ 22.73	\$ 55.78	\$ 24.99	\$ 59.45	\$ 26.78	\$ 63.73	\$ 28.73	\$ 68.37	\$27.73	\$67.67	\$12.00
2	\$ 29.55	\$ 78.95	\$ 31.89	\$ 83.53	\$ 34.19	\$ 89.54	\$ 36.67	\$ 96.05	\$35.93	\$95.66	\$12.00
3	\$ 65.71	\$ 183.62	\$ 69.90	\$ 192.83	\$ 74.93	\$ 206.71	\$ 80.39	\$ 221.75	\$79.69	\$222.19	\$12.00
4	\$ 123.42	\$ 317.77	\$ 133.89	\$ 336.05	\$ 143.53	\$ 360.25	\$ 153.97	\$ 386.46	\$150.20	\$384.98	\$12.00
6	\$ 247.36	\$ 625.23	\$ 268.41	\$ 659.20	\$ 287.74	\$ 706.67	\$ 308.67	\$ 758.08	\$301.04	\$757.07	\$12.00
8	\$ 362.47	\$ 932.69	\$ 391.92	\$ 982.36	\$ 420.14	\$ 1,053.09	\$ 450.71	\$ 1,129.71	\$440.85	\$1,129.16	\$12.00
10	\$ 503.96	\$ 1,260.77	\$ 548.41	\$ 1,331.30	\$ 587.89	\$ 1,427.16	\$ 630.67	\$ 1,531.00	\$613.65	\$1,527.03	\$12.00
12	\$ 599.63	\$ 1,478.30	\$ 655.75	\$ 1,566.51	\$ 702.96	\$ 1,679.30	\$ 754.11	\$ 1,801.49	\$730.78	\$1,791.60	\$12.00

Water Commodity Charges

January 1st, 2015

Per Month	Per Quarter	Inside Cincinnati	Inc Hamilton & Clermont	Uninc Hamilton Cty	Butler & Warren Cty	Arlington Heights	Venice Gardens
First 20 ccf	First 60 ccf	\$2.37	\$2.96	\$3.18	\$3.41	\$2.96	\$4.88
Next 580 ccf	Next 1740 ccf	\$1.99	\$2.48	\$2.66	\$2.86	\$2.48	\$4.10
Over 600 ccf	Over 1800 ccf	\$1.77	\$2.21	\$2.37	\$2.54	\$2.21	\$3.65

Meter Size in Inches	Number of Family Units	Minimum Charge Code	Monthly	Quarterly
5/8	1	1	\$ 57.11	\$117.35
3/4	2 or 3	2	\$ 68.49	\$151.32
1	4 or 5	3	\$ 88.14	\$207.44
1-1/2	6 thru 12	4	\$ 135.90	\$352.51
2	13 thru 20	5	\$ 187.29	\$499.33
3	21 thru 50	6	\$ 459.03	\$1,281.49
4	51 thru 115	7	\$ 760.08	\$2,122.30
6	116 thru 250	8	\$ 1,487.10	\$4,193.17
8	Over 250	9	\$ 2,210.47	\$6,256.78
10	Over 250	10	\$ 2,970.50	\$8,360.75
12	Over 250	11	\$ 3,458.83	\$9,653.24

COMMODITY CHARGES

Per Month	Per Quarter	Rate
First 5 ccf	First 9 ccf	Minimum charge (above)
Next 45 ccf	Next 141 ccf	\$5.879 per ccf
All over 50 ccf	All over 150 ccf	\$4.701 per ccf

* The minimum charge shall be based on the size of the water meter used to serve the premises, or the size of the premises served, as determined by the number of units therein, whichever results in the larger minimum charge.

On minimum charge 1 and 2 with family unit of 1 or 2, consumption billed during the second, third and fourth quarter will be billed on the consumption of the first quarter if it is lower. Those accounts in which no billing occurred in the first quarter will be billed for 25 ccf for minimum charge 1 and 35 ccf for minimum charge 2.

Meeting Summary

- **Alternative pricing mechanisms.** One of the main challenges identified by the Department in generating revenue is the trend towards water conservation and appliance efficiency.

Utilities in other jurisdictions have found ways of incentivizing conservation while ensuring revenues are generated. The process used by [retail residential energy/gas sector by PG&E on the West Coast](#) provides an example. **PG&E uses tiered pricing where the price increases with the amount of usage.** The lowest rate available is provided as a uniform baseline is set by PG&E at 50-60% of normal residential use. The baseline varies seasonally and is recalculated every three years. On the gas side, there are just two tiers: below baseline and above baseline.

Electric Tiered Rate Structure

Tier #	Description
Tier 1	Up to the Baseline amount
Tier 2	Electricity usage from 101% to 130% of Baseline
Tier 3	Electricity usage from 131% to 200% of Baseline
Tier 4	Electricity usage above 200% of Baseline

San Francisco Water Tiered Approach

First: A Monthly Service Charge based on the size of the meter.

Meter Size	FYE 2015 Effective 7/1/14	FYE 2016 Effective 7/1/15	FYE 2017 Effective 7/1/16	FYE 2018 Effective 7/1/17
5/8 in	\$8.81	\$9.87	\$10.86	\$11.63
3/4 in	\$11.09	\$12.43	\$13.68	\$14.64
1 in	\$15.66	\$17.54	\$19.30	\$20.66
1-1/2 in	\$27.08	\$30.33	\$33.37	\$35.71
2 in	\$40.79	\$45.69	\$50.26	\$53.78
3 in	\$72.77	\$81.51	\$89.67	\$95.95
4 in	\$118.46	\$132.68	\$145.95	\$156.17
6 in	\$232.69	\$260.62	\$286.69	\$306.76
8 in	\$369.76	\$414.14	\$455.56	\$487.45
10 in	\$529.67	\$593.24	\$652.57	\$698.25
12 in	\$986.57	\$1,104.96	\$1,215.46	\$1,300.55
16 in	\$1,717.61	\$1,923.73	\$2,116.11	\$2,264.24

In Francisco, [the residential water rates are based on a two-tiered approach](#). First, residential users pay a monthly fee based on the size of the meter. In addition, they pay for the first 3000 gallons (approx.) per month per dwelling unit at the first tier rate, and all use above that volume is charged an approx. 30% higher second tier rate.

Second: A charge for all water delivered based on monthly meter reading.

Single-Family Residential	Charge per Ccf			
	FYE 2015 Effective 7/1/14	FYE 2016 Effective 7/1/15	FYE 2017 Effective 7/1/16	FYE 2018 Effective 7/1/17
First 4 Units ¹ /DU ² /Month	\$4.86	\$5.45	\$6.00	\$6.42
All Additional Ccf/DU/Month	\$6.52	\$7.31	\$8.05	\$8.62

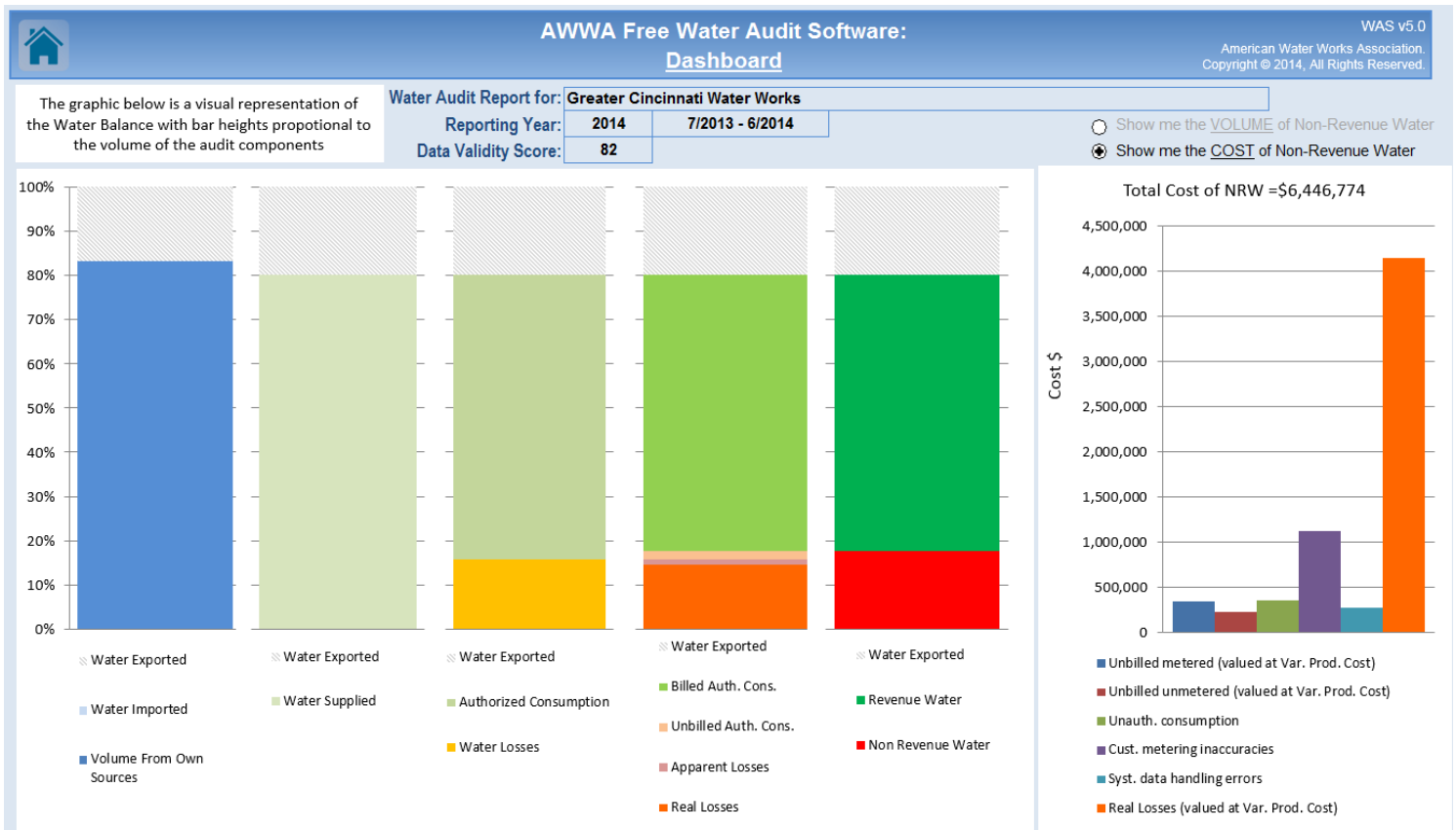
¹1 Unit = 1 Ccf of water = 748 gallons
²DU = Dwelling Unit; All Single-Family Residential customers have one dwelling unit per account

- **Water loss and theft.** In addition to rate increases and alternative pricing mechanisms, during our last WaterStat we also discussed how water loss and theft could affect the agency's solvency.

Meeting Summary

Water loss is tracked using AWWA Water Loss Validated Benchmark Study (FY2014). This extensive breakout and includes both authorized consumption and unknown water losses. A copy of this study is included as Attachment 6 to this report. Part of the data set includes a worksheet that will indicate lost revenue. This revenue is not to be considered fully recoverable as, by definition, there are inherent losses in all systems.

Water Loss Audit



Included in this study is the total of metered unbilled consumption. This generally represents water use that is metered but not billed, which includes supply to various City facilities. The value of free water in 2007 amounted to approximately \$988,000 annually, with the largest customers including the zoo, the park board, and the Cincinnati Recreation Commission. The table below shows a summary of the value of non-billed services provided.

Meeting Summary

Free Water Billed to the City of Cincinnati

WaterStat Question 3, Data Section, Subpart a Attachment 10

Description	FY 2014	FY 2013 (6 Month stub yr)	CY 2012	CY 2011	CY 2010	CY2009	CY 2008	CY 2007	CY 2006
Hundreds of Cubic Feet for Municipal Services	720,517	246,671	834,315	752,816	694,177	796,680	874,448	853,736	748,426
Total Thousand Gallons Billed	538,947	184,510	624,068	563,106	519,244	595,917	654,087	638,595	559,823
Value for Municipal Purposes (at Cincinnati Rate)	\$1,450,990	\$517,648	\$1,502,751	\$1,276,680	\$1,190,384	\$1,277,555	\$1,318,299	\$1,204,656	\$1,073,118
Number of Accounts	628	630	649	640	643	611	580	578	559

This data was taken from the 2011 GCWW Annual Report and the spreadsheet "ANNUALREPORTTABLES-Fiscal Year 2014" from Dan

Additionally, water theft is not a component of this study. GCWW does not currently have the resources in place to determine water lost through theft. We know that there is water theft amongst our customers; however, we do not know the magnitude of it to determine if it is something we should actively pursue. Often water theft is brought to our attention by a tenant or neighbor of the offender. As shared at the last meeting, in prior years and prior City administration, the direction to actively address water theft once notified of a situation was not a priority.

Example of Water Theft

“[For] a customer with approximately 30 properties[, a]bout 15 of those properties were being tampered with equaling about \$20,000 in water/sewer revenue lost. We have collected about \$10,000 to this point on the tampered properties. Our processes were built for several years ago when a meter reader could physically see the meter. Now with technology and meter readers no longer entering customer’s homes the landscape has changed. We need to rely on other methods to uncover theft of water. GCWW has yet to develop a program that consistently looks at potential water theft due to resource constraints.”

- **Other sources of revenue.** GCWW was also asked to identify all its sources of revenue. The below chart shows other revenue streams for the department.

GCWW performs the following services as additional revenue opportunities:

<i>Billing Services</i>	<i>Wholesale Water Sales</i>	<i>Operator of Record Services</i>
<i>Contact Center Services</i>	<i>Standby/Emergency Connections</i>	<i>Water Tower Lease Agreements</i>
<i>Lab Services</i>	<i>Distribution Operations & Maintenance</i>	<i>Fire Hydrant Maintenance</i>

Meeting Summary

WORK ORDERS

Biweekly Measures	Reporting Period						
	9/13	9/27	10/11	10/25	11/08	11/22	12/06
	9/26	10/10	10/24	11/07	11/21	12/05	12/19
Delinquent customer Shutdowns							
# delinquent work orders in period	2570	2517					
# work orders closed (actual shut offs) in period	800	767					
Average time (days) to complete shut off	31	34					
# work orders left in queue	3292	3198					
Average age (days) of work orders in queue							
Top call and feed							

Windows User:

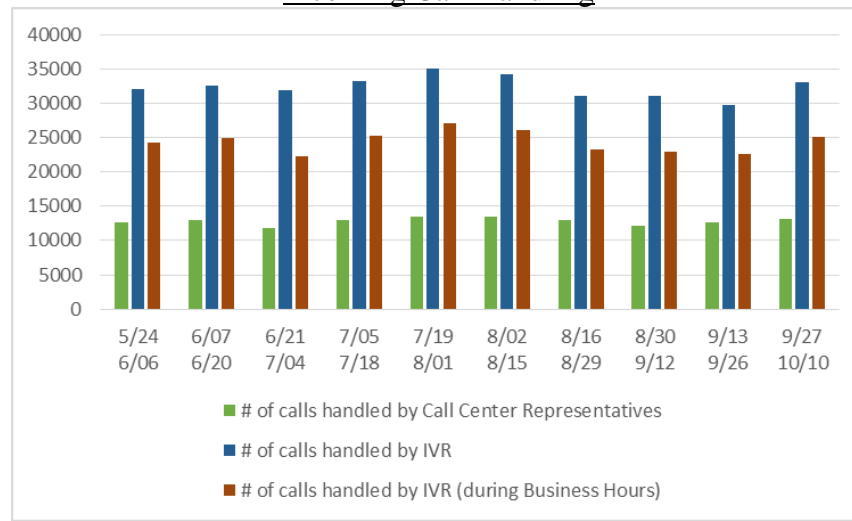
Our work is created with a date of 9/9/2049 to put the work into the queue. This makes it very difficult to calculate this. I will have a report designed to calculate this for the next time.

- **Performance Template.** OPDA coordinated with the Distribution Section of GCWW to develop key metrics to monitor for customer service requests and work orders.

CALL CENTER

- **Call statistics.** GCWW uses ASPECT as their call management system. The chart below shows some of the metrics that are tracked by the system not only for GCWW, but also for Alexandria and Lexington. **One key feature of the system is the IVR technology which allows automated response/self-services for customers calling.** To ensure an accurate understanding of their operations, GCWW measures its metrics both with and without IVR.

Incoming Call Handling



Meeting Summary

